

Remarks

Reconsideration of the application is respectfully requested in view of the following remarks. Claims 1 and 3-39 are pending in the application. No claims have been allowed. Claims 1, 20, 29, 31, and 36 are independent. Claims 1, 4, 20, 29-34, 36, and 37 have been amended.

Request for Information Disclosure Statement To Be Reviewed

Applicants note that the Action does not include an initialed copy of the Form 1449 which accompanied the Information Disclosure Statements filed on July 27, 2004 and May 3, 2006. Applicants request the Examiner provide initialed copies of the indicated Forms 1449.

§ 102 Rejections

The Action rejects claims 1 and 3-39 under 35 U.S.C. § 102(e) as being anticipated by Motoyama et al., U.S. Patent Application No. 6,578,090 (Motoyama). Applicants respectfully submit that the claims are allowable over Motoyama. To establish a prima facie case of anticipation, the applied art must show each and every element as set forth in a claim. MPEP § 2131.01. However, the Motoyama does not describe each and every element. Accordingly, Applicants requests that the § 102(e) rejection be withdrawn.

Claims 1 and 3-19

Amended claim 1 reads as follows (emphasis added):

A method of *representing type information for a typed intermediate language* via objects of classes in a class hierarchy, wherein the class hierarchy comprises at least one class and a plurality of sub-classes for representing different type classifications, the method comprising:

instantiating one or more objects of one or more of the sub-classes of the hierarchy, wherein the one or more sub-classes *represent classifications of types for the typed intermediate language*; and

storing information in the one or more objects;
wherein the typed intermediate language is capable of representing a plurality of different programming languages, and wherein the one or more objects represent type information for instructions in the typed intermediate language.

Support for the amendments to claim 1 can be found, for example, in the Application at page 3,

lines 12-21, page 8, lines 3-15, and page 15, lines 2-24.

Motoyama's description of multiple inheritance and derived classes does not teach or suggest "A method of representing type information for a typed intermediate language ... wherein the one or more sub-classes represent classifications of types for the typed intermediate language ... wherein the typed intermediate language is capable of representing a plurality of different programming languages, and wherein the one or more objects represent type information for instructions in the typed intermediate language" as recited in claim 1.

Motoyama describes "a class structure using multiple inheritance to construct various data structures." Motoyama, col. 9, lines 63-65. Fig. 2A of Motoyama depicts two derived classes (derived class 1 and 2) each with its own defined variables (derived class 1 defines variable: int var1, and derived class 2 defines variables: int var2 and int var3). Motoyama describes that the "Data Analysis Unit" (element 6 in Fig. 1) stores values in the appropriate object (derived class 1 or 2) based on the input data. Motoyama at col. 10, lines 49-64. Motoyama then describes application classes (application class 1 and 2) that are derived using multiple inheritance. Motoyama col. 11, lines 13-40, and Fig. 2A. The application classes inherit the variables from corresponding derived classes (e.g., application class 1 inherits the variable: int var1, and the setVar1 function). The application classes define the virtual function fcn1 (e.g., application class 1 defines fcn1 as adding var1 to a sum and writing the two variables). Motoyama describes instantiating application classes at col. 19, line 50 and Fig. 4. Motoyama describes an advantage of this multiple inheritance arrangement is that changes can be made to the application data and application classes (the right hand side of the dotted line in Fig. 2A) without having to change the data analysis unit or the derived classes (the left hand side of the dotted line in Fig. 2A). Motoyama, col. 11, lines 52-61.

Motoyama does not teach or suggest "A method of representing type information for a typed intermediate language ... wherein the one or more sub-classes represent classifications of types for the typed intermediate language ... wherein the typed intermediate language is capable of representing a plurality of different programming languages, and wherein the one or more objects represent type information for instructions in the typed intermediate language" as recited in claim 1. The sub-classes of claim 1 "represent classifications of types for the typed intermediate language." Motoyama's derived classes define variables (e.g., int var1) for software applications. Furthermore, Motoyama is not concerned with "representing type information for a typed intermediate language," as recited by

claim 1. In fact, Motoyama's classes are not even associated with a typed intermediate language. Instead, Motoyama describes separating classes into derived classes and application classes such that changes in application classes can be made without changing derived classes.

For at least these reasons, Motoyama does not teach or suggest the above-cited language of claim 1. Therefore, claim 1 should be in condition for allowance.

Claims 3-19 ultimately depend on claim 1. Thus, for at least the reasons set forth above with regard to claim 1, claims 3-19 should be in condition for allowance.

Claims 20-39

Claims 20, 29-34, 36, and 37 have been amended. Support for the amendments can be found, for example, in the Application at page 3, lines 12-21, page 8, lines 3-15, and page 15, lines 2-24.

With regard to claims 20-39, the Action rejects the claims "for the same reasons as cited in claims 1-17," giving no other indication of the reasons for rejection. Action, page 9. Thus, for at least the reasons discussed above, Motoyama does not teach or suggest each and every element of claims 20-39. Applicants therefore request that the rejections of claims 20-39 be withdrawn and that the claims be allowed.

Request for Interview

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

Conclusion

The claims should be allowable. Such action is respectfully requested.

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Respectfully submitted,

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